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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/700,185	12/18/2000	Takayuki Anaki	P06971US00/L	2588

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EXAMINER

RUTHKOSKY, MARK

ART UNIT

PAPER NUMBER

1745

DATE MAILED: 09/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

T.D

Office Action Summary

Application N .

09/700,185

Applicant(s)

ARAKI ET AL.

Examiner

Mark Ruthkosky

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>6 and 7</u> . | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35

U.S.C. 119(a)-(d). The certified copy has been filed in PCT Application No. PCT/JP99/02398,

filed on May 10, 1999. *Information Disclosure Statement*

2. The information disclosure statements filed 2/7/2001 and 10/26/2001 have been placed in the application file, and the information referred to therein has been considered as to the merits.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter that the applicant regards as his invention.

4. Claims 18 and 22-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 22 defines the values of variables, "as defined above," however, this is an independent claim and it is not clear what the values are for the claim.

Correction is required.

Claim 18 refers to the variables of Formula 1; however, there are multiple formulae defined as Formula 1. For clarity, this should be corrected or further defined.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Masayuki et al. (JP 06-260,184.)

The instant claims are to a material for a solid polyelectrolyte comprising a multi-segmented fluoropolymer having at least two types of fluoropolymer chain segments. One type of segment includes a sulfonic acid functional group and a second type does not include a sulfonic acid functional group.

Masayuki et al. (JP 06-260,184) teaches a fuel cell with a solid, polyfluorocarbon copolymer, electrolyte material. A copolymer of tetrafluoroethylene (or other fluoropolymers as noted in pp. 13) and a monomer of fluoroethylene with a sulfonic acid functional group is shown in claim 3. The monomer include an ethylenic fluoropolymer unit attached by an ether linkage to a sulfonic acid chain (see the examples under Formula 1 in the reference.) Formula 1 of the reference reads upon Formula 1 of the claims. The fluoropolymers have different equivalent weights based on their structures.

The melting point, glass transition values, modulus of elasticity, and molecular weights of the materials are inherent to the structure of the monomers and copolymer and are therefore inherent properties of the material.

As such, the claims are anticipated.

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7. Claims 1-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Harada (US5,399,184.)

Harada (US 5,399,184) teaches an electrolyte membrane for a fuel cell comprising a perfluorosulfonic acid-group containing copolymer of tetrafluoroethylene units and perfluorovinyl ether units as shown in claim 1 (formula 1 or 2). Formula 1 of the reference reads upon Formula 1 of the claims. The fluoropolymers have different equivalent weights based on their structures. Specific examples 1-8 and claims 1-10 show average molecular weights and thickness of the materials.

The melting point, glass transition values, modulus of elasticity, and molecular weights of the materials are inherent to the structure of the monomers and copolymer and are therefore inherent properties of the material.

As such, the claims are anticipated.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited art does not read upon the instant claims, however, the references include general teachings and relevant features as to the state of the art at the time of the invention.

Examiner Correspondence

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1193. Any inquiry concerning this communication or earlier communications from the examiner should be directed

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to Mark Ruthkosky whose telephone number is 703-305-0587. The examiner can normally be reached on FLEX schedule (generally, Monday-Thursday from 9:00-6:00.) If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan, can be reached at 703-308-2383.

The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Mark Ruthkosky

Patent Examiner

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Mark Ruthkosky
9/27/02